Please provide the following information, and submit to the NOAA DM Plan Repository.

Reference to Master DM Plan (if applicable)

As stated in Section IV, Requirement 1.3, DM Plans may be hierarchical. If this DM Plan inherits provisions from a higher-level DM Plan already submitted to the Repository, then this more-specific Plan only needs to provide information that differs from what was provided in the Master DM Plan.

URL of higher-level DM Plan (if any) as submitted to DM Plan Repository:

1. General Description of Data to be Managed

1.1. Name of the Data, data collection Project, or data-producing Program:
Salt Marsh Resilience, National, 2010

1.2. Summary description of the data:
This polygon data set includes raw values and normalized scores for thirteen landscape scale metrics that characterize marsh resilience to sea level rise within watersheds along the coast of the conterminous United States. These metrics fall into bins related to current marsh condition, marsh vulnerability, and adaptation potential. The data are summarized at the watershed scale (HUC-12 units).

1.3. Is this a one-time data collection, or an ongoing series of measurements?
One-time data collection

1.4. Actual or planned temporal coverage of the data:
2009-01-20 to 2011-11-11

1.5. Actual or planned geographic coverage of the data:
W: -127.854, E: -65.362, N: 51.534, S: 22.885

1.6. Type(s) of data:
(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.)
File Geodatabase

1.7. Data collection method(s):
(e.g., satellite, airplane, unmanned aerial system, radar, weather station, moored buoy, research vessel, autonomous underwater vehicle, animal tagging, manual surveys, enforcement activities, numerical model, etc.)

1.8. If data are from a NOAA Observing System of Record, indicate name of system:

1.8.1. If data are from another observing system, please specify:

2. Point of Contact for this Data Management Plan (author or maintainer)

2.1. Name:
NOAA Office for Coastal Management (NOAA/OCM)

2.2. Title:
Metadata Contact

2.3. Affiliation or facility:
NOAA Office for Coastal Management (NOAA/OCM)

2.4. E-mail address:
coastal.info@noaa.gov

2.5. Phone number:
(843) 740-1202

3. Responsible Party for Data Management
Program Managers, or their designee, shall be responsible for assuring the proper management of the data produced by their Program. Please indicate the responsible party below.

3.1. Name:

3.2. Title:
Data Steward

4. Resources
Programs must identify resources within their own budget for managing the data they produce.

4.1. Have resources for management of these data been identified?

4.2. Approximate percentage of the budget for these data devoted to data management (specify percentage or "unknown"):

5. Data Lineage and Quality
NOAA has issued Information Quality Guidelines for ensuring and maximizing the quality, objectivity, utility, and integrity of information which it disseminates.

5.1. Processing workflow of the data from collection or acquisition to making it publicly accessible
(describe or provide URL of description):
Process Steps:
- 2020-09-01 00:00:00 - Marsh Unit Codes (MUC) were created from the C-CAP 30 meter land cover data. Classes 16-18 (the estuarine wetland classes) were extracted and recoded using a morphometric algorithm to distinguish between different components of the marsh units. The following classification scheme was established:

gridcode1 = core wetland gridcode2 = vegetated edge of wetland   gridcode3 = unvegetated edge of wetland   Core-to-edge ratio computed from MUCs and aggregated by 12-digit HUC. [Core_Edge_ratio = gridcode1 / (gridcode2 + gridcode3)]
    Unvegetated edge to vegetated edge ratio was computed from MUCs and aggregated by 12-digit HUC. [UnvegVegEdge_ratio = gridcode3 / gridcode2]   A simplified version of the C-CAP 30 meter land cover was generated to facilitate derivation of land cover metrics. The resulting data layer had the following classification scheme: gridcode2 = high intensity developed gridcode3 = medium intensity developed gridcode4 = low intensity developed gridcode5 = open space developed gridcode6 = agricultural classes (pasture/hay, cultivated) gridcode7 = natural cover types (grassland, shrub, forest)   Percent impervious cover was computed from the simplified version of C-CAP 30 meter land cover data and aggregated by 12-digit HUCs. Analysis was performed within a 150 meter buffer around each marsh unit. [Perc_IC = ((gridcode2 * 0.8503) + (gridcode3 * 0.5768) + (gridcode4 * 0.2929) + (gridcode5 * 0.0941)) / Total_Area * 100]   Percent natural cover was computed from the simplified version of C-CAP 30 meter land cover data and aggregated by 12-digit HUCs. Analysis was performed within a 150 meter buffer around each marsh unit. [Perc_Natural = gridcode7 / Total_Area * 100]   Percent agricultural cover was computed from the simplified version of C-CAP 30 meter land cover data and aggregated by 12-digit HUCs. Analysis was performed within a 150 meter buffer around each marsh unit. [Perc_Ag = gridcode6 / Total_Area * 100]
 Soil erodibility was computed using Esri's USA Soils Erodibility Factor image service (https://landscape11.arcgis.com/arcgis/rest/services/ USA_Soils_Erodibility_Factor/ImageServer, accessed March 2018). Analysis was performed within each marsh unit, not the entire HUC. The average erodibility factor for each marsh unit was weighted by the size of the marsh unit and aggregated by 12-digit HUC.   Tidal range was computed as the height difference between Mean Higher High Water (MHHW) and Mean Lower Low Water (MLLW) measured in meters. The tidal datum data were extracted from the VDatum tool and interpolated across data gaps to provide complete coverage within the study area.   Percent of marsh below mean higher high water (MHHW) was computed by intersecting all marsh units below MHHW, dividing by the total marsh area, and aggregating by 12-digit HUC.   Percent of marsh below mean tide level (MTL) was computed by intersecting all marsh units below MTL, dividing by the total marsh area, and aggregating by 12-digit HUC.   Percent hardened shoreline was computed using the Environmental Sensitivity Index (ESI) database. The ESI shoreline data were divided by and associated with 12-digit HUC codes. Within each HUC, all shoreline features that were armored (GENERALIZED_ESI_TYPE LIKE '%Armored%') were divided by the total shoreline length and multiplied by 100.   Environmental Sensitivity Index (ESI) maps provide a concise summary of coastal resources that are at risk if an oil spill occurs nearby. Examples of at-risk resources include biological resources (such as birds and shellfish beds), sensitive shorelines (such as marshes and tidal flats), and human-use resources (such as public beaches and parks).

- 2020-09-01 00:00:00 - NOAA ESI National Shoreline (2017)   Migration space was determined using NOAA's sea level rise inundation data. Within every 12-digit HUC and for each foot of inundation above MHHW, the area of potential future marsh was divided by the current area of marsh to generate a ratio of future to present " potential" marsh area. This operation was performed for 1-6 feet of sea level rise inundation scenarios. For each SLR scenario, the resulting migration ratio values were ranked and scored by a quantile distribution function. The six scenarios were were then averaged, a new quantile rank and score was generated and reported by AVG_migration_ratio.   Wetland connectedness, at this national level analysis, was computed using the marsh unit data (MUCs) and an analysis of projected fragmentation/consolidation under the 4 foot future sea level rise (SLR) scenario. A region grouping process was used to group all connected marsh units under current and future scenarios. Within each 12-digit HUC, the number of unique future marsh units were subtracted from the number of unique current marsh units, and divided by the number of unique current marsh units. This became the unitless raw value for the Wetland_Connectedness metric.   Shoreline sinuosity was assessed using the NOAA ESI shoreline vector data to characterize sinuosity within each 12-digit HUC. A sinuosity index was computed using a Sinuosity python script provided by Esri. High values represent linear shorelines and low values represent sinuous shorelines. Since the the sinuosity script generates values from 0-1, where 1 is a straight feature, we multiplied the sinuosity index by -1 so that values closer to 0 were scored higher in the quantile index.   Quantile scores were generated using a python script developed by NOAA OCM. Each metric was ranked and scored 1-10 based on the quantile position in the ranking. The quantile scores were then inversed if required based on the intent of the metric (negative or positive contributor to resilience). The quantile scores were summed by category (current condition, vulnerability, and adaptive capacity) and all combined, and new quantile rankings and scores were generated.   The numerical quantile scores were used to generate ordinal data describing the degree to which marsh units scored "low" or " high" for each resilience category (current condition, vulnerability, and adaptive capacity). Scores 1-5 were assigned "low" and scores 6-10 were assigned "high." An overall management category was generated using a concatenation of the three resilience categories, in the order just shown.

5.1.1. If data at different stages of the workflow, or products derived from these data, are subject to a separate data management plan, provide reference to other plan:

5.2. Quality control procedures employed (describe or provide URL of description):

6. Data Documentation
The EDMC Data Documentation Procedural Directive requires that NOAA data be well documented, specifies the use of ISO 19115 and related standards for documentation of new data, and provides

links to resources and tools for metadata creation and validation.

6.1. Does metadata comply with EDMC Data Documentation directive?
No

6.1.1. If metadata are non-existent or non-compliant, please explain:
Missing/invalid information:
- 1.7. Data collection method(s)
- 3.1. Responsible Party for Data Management
- 4.1. Have resources for management of these data been identified?
- 4.2. Approximate percentage of the budget for these data devoted to data management
- 5.2. Quality control procedures employed
- 7.1. Do these data comply with the Data Access directive?
- 7.1.1. If data are not available or has limitations, has a Waiver been filed?
- 7.1.2. If there are limitations to data access, describe how data are protected
- 7.3. Data access methods or services offered
- 7.4. Approximate delay between data collection and dissemination
- 8.1. Actual or planned long-term data archive location
- 8.3. Approximate delay between data collection and submission to an archive facility
- 8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?

6.2. Name of organization or facility providing metadata hosting:
NMFS Office of Science and Technology

6.2.1. If service is needed for metadata hosting, please indicate:

6.3. URL of metadata folder or data catalog, if known:
https://www.fisheries.noaa.gov/inport/item/62985

6.4. Process for producing and maintaining metadata
(describe or provide URL of description):
Metadata produced and maintained in accordance with the NOAA Data Documentation Procedural Directive: https://nosc.noaa.gov/EDMC/DAARWG/docs/EDMC_PD-Data_Documentation_v1.pdf

7. Data Access
NAO 212-15 states that access to environmental data may only be restricted when distribution is explicitly limited by law, regulation, policy (such as those applicable to personally identifiable information or protected critical infrastructure information or proprietary trade information) or by security requirements. The EDMC Data Access Procedural Directive contains specific guidance, recommends the use of open-standard, interoperable, non-proprietary web services, provides information about resources and tools to enable data access, and includes a Waiver to be submitted to justify any approach other than full, unrestricted public access.

7.1. Do these data comply with the Data Access directive?

7.1.1. If the data are not to be made available to the public at all, or with limitations, has a Waiver (Appendix A of Data Access directive) been filed?

7.1.2. If there are limitations to public data access, describe how data are protected from unauthorized access or disclosure:

7.2. Name of organization of facility providing data access:
NOAA Office for Coastal Management (NOAA/OCM)

7.2.1. If data hosting service is needed, please indicate:

7.2.2. URL of data access service, if known:

7.3. Data access methods or services offered:

7.4. Approximate delay between data collection and dissemination:

7.4.1. If delay is longer than latency of automated processing, indicate under what authority data access is delayed:

8. Data Preservation and Protection
The NOAA Procedure for Scientific Records Appraisal and Archive Approval describes how to identify, appraise and decide what scientific records are to be preserved in a NOAA archive.

8.1. Actual or planned long-term data archive location:
(Specify NCEI-MD, NCEI-CO, NCEI-NC, NCEI-MS, World Data Center (WDC) facility, Other, To Be Determined, Unable to Archive, or No Archiving Intended)

8.1.1. If World Data Center or Other, specify:

8.1.2. If To Be Determined, Unable to Archive or No Archiving Intended, explain:

8.2. Data storage facility prior to being sent to an archive facility (if any):
Office for Coastal Management - Charleston, SC

8.3. Approximate delay between data collection and submission to an archive facility:

8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?
Discuss data back-up, disaster recovery/contingency planning, and off-site data storage relevant to the data collection

9. Additional Line Office or Staff Office Questions
Line and Staff Offices may extend this template by inserting additional questions in this section.